National Institute of Environmental Health Sciences

Impact of meteorological conditions on the occurrence of acute type A aortic dissections

Author(s): Benouaich V, Soler P, Gourraud PA, Lopez S, Rousseau H, Marcheix B
Year: 2010
Journal: Interactive Cardiovascular and Thoracic Surgery. 10 (3): 403-406

Abstract:

The impact of meteorological conditions on the occurrence of various cardiovascular events has been reported. The aim of this work was to study the correlations between weather conditions and the occurrence of type A acute aortic dissections (AADs). Between 1997 and 2007, all the medical records of patients who underwent surgery for type A AADs in Toulouse University Hospital (France) were reviewed. The clinical data were confronted with the meteorological data provided by the French national meteorological office (MeteoFrance) over the same period. Two hundred and six patients with spontaneous type A AADs underwent surgery during this period. The incidence of aortic dissection was higher in winter time than in summer (PEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.018). The days with aortic dissections were colder than those without aortic dissections (PEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.017). Statistical analysis highlighted a decrease of atmospheric temperature during the three days preceding the upset of the symptoms (PEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.0009). This work demonstrates a correlation between spontaneous type A AADs and low atmospheric temperature.

Source: http://dx.doi.org/10.1510/icvts.2009.219873

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : France

Health Impact:

specification of health effect or disease related to climate change exposure

Cardiovascular Effect

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): Type A acute aortic dissections (AADs)

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified